

SPECIFICATIONS PURSUANT TO C2.35# - DESIGNATION OF TIMBER, CUTTING UNIT
BOUNDARIES, AND SUBDIVISION/PAYMENT UNIT BOUNDARIES

Timber Designation Table

Cutting Unit/ Subdivision/Area/ Payment Unit	Tree Paint Color	Designation or Specification
Sale Area	Green	<u>Hazard Tree</u> . Notwithstanding B2.32 all dead and unstable live trees which are leaning towards a road or are otherwise hazardous to a road, and are sufficiently tall to reach Purchaser's landings or the roadbed of National Forest System roads within Sale Area, shall be felled by Purchaser when Marked in the specified paint color above and below stump height by Forest Service in advance of felling any other timber in the vicinity. Pieces meeting Utilization Standards from such dead and unstable live trees shall be removed unless Purchaser is notified in writing that removal would cause unacceptable damage to areas requiring special protection such as residual timber, roads, administrative sites, streamside management zones, and areas identified on Sale Area Map or on the ground.
Unit 11,22 & 26	Blue	<u>Individual Tree Mark</u> . Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
Unit 52 & 53	Green	
Unit 12, 13, 14, 16, 19, 20, 21, 23, 24, 25, 29, 30, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 & 50	Orange	<u>Leave Tree Mark</u> . All live <u>pine, white fir and incense cedar</u> are designated for cutting unless Marked as leave trees. Leave trees are Marked above and below stump height with the specified paint color. Sale Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut.
Sale Area	Orange W	<u>Wildlife Trees</u> . Notwithstanding the designation for cutting under B2.31, B2.33, B2.34, or B2.35, trees which are identified by standard Forest Service metal wildlife tree sign or painted with the specified paint color on the uphill and downhill side, shall be left uncut. In event such trees are destroyed in Purchaser's Operations, Forest Service may designate alternate trees to be saved.
Sale Area	Black	<u>Marked Out Trees</u> . When it is necessary to delete previously marked trees, a unique tree marking paint color will be Marked over or adjacent to the original mark, but will not obscure the original marking. Trees Marked with the original marking paint color and the unique tree marking paint color are not Included Timber.
		Designation by Spacing C2.351#
		Designation by Species and Diameter, C2.352#
		Designation by Damage Class, C2.353#
		Designation by Row Spacing, C2.354#

Subdivision/Payment Unit and Cutting Unit Boundary Designation Table

<u>Subdivision/Payment Unit</u>	<u>Boundary Paint Color</u>	<u>Boundary Designation</u>
	Orange	
<u>Cutting Unit</u>	<u>Boundary Paint Color</u>	<u>Boundary Designation</u>
11, 12, 13, 14, 16, 19, 20, 21, 22, 23, 24, 25, 26, & 43	White	Boundary trees are designated with three vertical stripes of white tracer paint with the center stripe facing into the unit with the remaining stripes facing the adjoining boundary trees. Stumps are marked with white tracer paint at ground level.
29, 30, 36, 37, 38, 39, 40, 41, 42, 44, 45, 46, 47, 48, 49 & 50	Orange	Boundary trees are designated with three vertical stripes of orange tracer paint with the center stripe facing into the unit with the remaining stripes facing the adjoining boundary trees. Stumps are marked with orange tracer paint at ground level.
52 & 53	N/A	Boundary Trees are not designated. Roadside Hazard Tree Units.

<u>Code</u>	<u>Use Limitations</u>
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
47T09A	N/A	47N09(CR181)	termini	P	Decommission
47T09VA	N/A	47T09V	termini	P	Decommission
47A49B	N/A	47N49	termini	P	Decommission
47N53	N/A	47N09(CR181)	T47N,R12E section 21	P	Decommission

Contract Road Maintenance Requirements Summary

[illegible]

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Sale Name: South Barry Fire Salvage

	Termini			Applicable During Haul Road Maintenance Specifications									
Road	From	To	Miles	801	802	803	804	805	806	807	808	809	810
47N47A	Unit 26	47N47	.1			P			P				
47N47	47N47A	47N71	.8			P			P				
47N53	Unit 14	47N71	1.0			P			P				
47N54A	Unit 25	47N54	.2			P			P				
47N54	47N54A	47N71	1.5			P			P				
47N54	47N54A	CR181	.9			P			P				
47N49	Unit 19	47N71	.95			P			P				
47N56	47N19	47N71	.65			P			P				
47N56	47N19	Unit 20	1.00			P			P				
47N56	Unit 20	CR181	.85			P			P				
47N19	47N56	Landings	.6			P			P				
47N71	Unit 11	47N54	1.6			P			P				
47N71	47N49	47N56	.5			P			P				
47N08	Unit 16	CR181	2.3			P			P				
47N68	Unit 21	CR 181	.2			P			P				
47T09GA	Unit 45	47T09G	.2			P			P				
47T09G	Unit 45	CR 181	1.3			P			P				
47N65	Unit 48	47N63	.25			P			P				
47N65	47N63	47N60	1.2			P			P				
47N60	47N65	CR 181	1.9			P			P				
47N65	Unit 30	CR 181	1.55			P			P				
47T65B	Unit 30	47N65	.15			P			P				
47N65A	Unit 30	47N65	.2			P			P				
47N65C	Unit 30	47N65	.6			P			P				
47A09Z	Unit 42	CR 181	.95			P			P				
47N09B	Unit 44	CR 181	1.25			P			P				
47N09A	Unit 47	CR 181	.3			P			P				
47N20C	Unit 39	47G20A	.25			P			P				
47G20A	47G20C	47N20	.6			P			P				
47N20	Unit 41	48N08	2.1			P			P				
48N08	Unit 37	47N20	.3			P			P				
48N08	47N20	CR181	1.7			P			P				
All Temp	Start	Finish							P				
Existing Non System Roads	Start	Finish							P				

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

SPECIFICATIONS PURSUANT TO C5.35# - REQUIREMENTS OF ROAD AND WATER SUPPLY USE

Load Limitations	<p>Purchaser shall notify Forest Service in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation under B6.311. Within 15 days after receipt of the written notice Forest Service shall notify Purchaser in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities.</p> <p>A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.</p>
Existing Non-National Forest System Roads	<p>Roads not shown on Sale Area Map may be used as Temporary Roads if there is agreement before use is started.</p>
Snow Removal	<p>If Purchaser removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources.</p> <p>Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils.</p> <p>Snow must not be removed to the road surface. A minimum < 3 > inch snow depth must be left to protect the roadway. If the road surface is damaged, Purchaser shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing.</p> <p>Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with intervisible turnouts.</p>

Water Supply Deposits	<p>If Purchaser utilizes the water site located at , for any listed activity, Purchaser shall make deposit with Forest Service for that activity at the time and in the amount shown in the Water Supply Deposit Schedule table below.</p> <p style="text-align: center;">WATER SUPPLY DEPOSIT SCHEDULE</p> <table><tr><th>Activity</th><th>Unit of Payment</th><th>Unit Cost</th><th>Total Cost</th><th>Time of Payment</th></tr><tr><td>N/A</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	Activity	Unit of Payment	Unit Cost	Total Cost	Time of Payment	N/A																																												
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Surface Replacement Deposits	<p>Purchaser shall make Required Deposits for deferred surface replacement (16 U.S.C. 537) for use of existing surfaced roads. If applicable, such deposits shall be based upon the volume and distance hauled on the roads and at the applicable rates listed in the table below titled Surface Replacement Deposit Schedule. If Purchaser uses surfaced roads under jurisdiction of Forest Service other than those listed, Forest Service may establish applicable rates for such surfaced roads.</p> <p style="text-align: center;">SURFACE REPLACEMENT DEPOSIT SCHEDULE</p> <table><tr><th>Road No.</th><th>From</th><th>To</th><th>Miles</th><th>Rate</th></tr><tr><td>48N08</td><td>Unit 16</td><td>CR181</td><td>2.30</td><td>\$0.16/MBF</td></tr><tr><td>47N60</td><td>47N63</td><td>CR 181</td><td>1.50</td><td>\$0.13/MBF</td></tr><tr><td>47N09B</td><td>Unit 42</td><td>CR 181</td><td>0.50</td><td>\$0.02/MBF</td></tr><tr><td>48N08</td><td>47N20</td><td>CR 181</td><td>1.70</td><td>\$0.31/MBF</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table> <p style="text-align: center;">Sale Area Average Rate: \$ 0.62/ MBF</p>	Road No.	From	To	Miles	Rate	48N08	Unit 16	CR181	2.30	\$0.16/MBF	47N60	47N63	CR 181	1.50	\$0.13/MBF	47N09B	Unit 42	CR 181	0.50	\$0.02/MBF	48N08	47N20	CR 181	1.70	\$0.31/MBF																									
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SCHEDULE PURSUANT TO C6.315# - SALE OPERATIONS SCHEDULE (8/2006)

<u>Subdivision/ Area/Unit</u>	<u>Conditions of Operation</u>	<u>Purpose</u>
Units 36, 38, 40, 49, the northwest finger of unit 29 and the portions of unit 53 between units 36 & 37.	Unless otherwise agreed, Purchaser operations are prohibited between February 15 and September 15 within $\frac{1}{4}$ mile of Controlled Area. If the historical nest is unoccupied then the limiting operating period (LOP) will apply to the protected activity center (PAC) until surveys determine if an alternate nest location exists.	To avoid interfering with active Goshawk nests
Units 11, 12, 19, 36, 38, 40, the northwest finger of unit 16 and the portions of unit 53 between units 36 & 37.	Unless otherwise agreed, Purchaser operations are prohibited between March 1 and August 15 within $\frac{1}{4}$ mile of Controlled Area. If the historical nest is unoccupied then the limiting operating period (LOP) will apply to the protected activity center (PAC) until surveys determine if an alternate nest location exists.	To avoid interfering with active Great Gray Owl nests

SPECIFICATIONS AND TREATMENTS PURSUANT TO C6.41# - FELLING, BUCKING AND LIMBING

Treatment Method and Applicable Map Symbol	Felling, Bucking and Limbing Specifications
Limbing	Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided by BT6.414, Purchaser shall, prior to skidding/yarding operations, cut exposed limbs from products which are to be skidded/yarded. Such limbing of stems shall be done to a top diameter of approximately n/a inches, at which point the top shall be cut from the remainder of the stem.
No Lop "No Lop"	Within units or subdivisions designated NO LOP on Sale Area Map, trees shall be skidded/yarded to agreed landing locations prior to lopping.
Whole Tree Yarding "Whole"	Notwithstanding the requirements above, within units or subdivisions designated "Whole" on Sale Area Map, trees smaller than 21 inches DBH shall be skidded/yarded to agreed landing locations prior to limbing, bucking, and lopping. Trees larger than or equal to 21 inches DBH shall be bucked into two or more pieces with the butt portion being no longer than 41 feet prior to skidding/yarding. The butt log shall be limbed prior to skidding/yarding.
Directional Felling "DF"	Within areas designated DF on Sale Area Map, Included Timber shall be directionally felled away from travel routes, private property lines, fences, controlled areas, streamside management zones, wet meadows, powerlines, Tuscarora Pipeline corridor and railroad right of way with the use of specialized equipment. Such directional felling shall not be required when in the faller's judgment it is unsafe to do so, and shall be left standing.
Treatment of Stumps "TS"	<p>Within areas shown on Sale Area Map, Purchaser shall treat stumps of all live pine and juniper trees equal to or greater than 14 inches stump diameter, (measured inside bark) unless otherwise agreed in writing. Treatment shall be with a borate compound registered by EPA in the State of California for prevention of annosus root disease.</p> <p>Treatment shall consist of removal of sawdust and other loose debris from the cut surface of the stump and application of a thin layer of the borate compound uniformly over the entire cut surface, including exposed wood surfaces on the stump sides, at the rate specified on the product label. Any surface irregularities on the stump preventing application of a uniform layer of borate compound</p>

	<p>shall be cut level prior to treatment. Unless waived in writing, Purchaser shall also apply an approved colorant mixed with the borate compound to insure complete coverage. Treatment should be done as soon as possible but shall be completed no later than 4 hours after felling, otherwise stumps shall be re-cut and treated.</p> <p>Purchaser shall not apply borate compound during heavy rain fall or when such precipitation rate is predicted within 4 hours of application to cause borate compound to be flushed off the stump and become ineffective, in that case treatment shall be reapplied. Application shall be completed within 24 hours of the precipitation having ceased. Borate compound also shall not be applied to stumps located within 100 feet of live streamcourses and meadows/wetlands shown on Sale Area Map and/or 50 feet of sensitive plant location boundaries as flagged on the ground.</p> <p>Purchaser shall provide the borate compound and colorant and apply it in compliance with the State of California laws and regulations pertaining to pesticides and pest control operations. Borate compound storage shall be located such that any spillage will not contaminate water. All spills shall be promptly cleaned up and spilled material disposed of according to the product label. All spills occurring in water or over 25 pounds shall be reported to Forest Service within 24 hours.</p> <p>Purchaser shall submit at the end of each month a "Monthly Summary of Pesticide Use Reports" to the appropriate County Agricultural Commissioner with a copy to the District Ranger.</p>															
Maximum Log Length	<p>Cut trees shall be bucked prior to skidding so that resulting logs shall not exceed the maximum log length including trim allowance shown in following table:</p> <table><tr><td>Unit Number</td><td>Maximum Log Length</td></tr><tr><td>All</td><td>41'</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Unit Number	Maximum Log Length	All	41'											
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Minimum Stump Height	<table><tr><td>Unit/Subdivision</td><td>Minimum Stump Height (inches)</td><td>Purpose or Reason</td></tr><tr><td>All</td><td>4"</td><td>Accountability</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Unit/Subdivision	Minimum Stump Height (inches)	Purpose or Reason	All	4"	Accountability									
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All	4"	Accountability														

Ground-Based Skidding Table - C6.42#

Map Symbol	Requirements
TRAC	<p>Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. Purchaser shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding.</p> <p>Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain.</p>
SUSP	Products shall be skidded with leading end clear of ground.
SPACE	Skid roads will average <u>NA</u> feet from center to center, except where converging.
ENDL	Endlining shall not be required for distances in excess of <u>75</u> feet uphill, and <u>75</u> feet downhill.
MAX	Tractors used for skidding outside Clearcutting Units, regeneration units or other authorized clearings, shall be of the type (rubber-tired or track-laying) shown on the Sale Area Map and shall not exceed the overall width designated on Sale Area Map.
MH	<p>Purchaser shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least <u>20</u> feet for bunching trees, capable of severing, lowering and placing trees up to <u>20</u> inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to <u>35</u> %.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage.</p> <p>Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of B6.41 - Felling and Bucking, C6.41# - Felling, Bucking, and Limbing Requirements and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>
CTL	<p>Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Limbs of Included Timber shall be placed evenly in the machinery skid trail prior to product removal. The harvester shall be an all-wheel drive machine with at least 3 axles and a processing head mounted on a boom having a minimum-operating radius of 20 feet.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from</p>

	<p>unnecessary damage.</p> <p>All Products shall be removed by an all-wheel drive forwarder with at least 3 axles capable of self-loading and unloading. The forwarder shall carry all products free of the ground during removal. The loading crane shall have a minimum-operating radius of 15 feet. Log landings and transfer points shall be agreed in advance of harvesting.</p> <p>Included Timber exceeding the harvester's capability may be felled by conventional chainsaw methods, forwarded to nearest skid trail and processed into a finished Product with harvester or chainsaw, consistent with the requirements B6.61 - Meadow Protection, B6.41 - Felling and Bucking, C6.41# - Felling, Bucking, and Limbing and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>
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SPECIFICATIONS PURSUANT TO C6.6# - EROSION PREVENTION AND CONTROL.

Vegetative Soil Stabilization Where soil has been disturbed by Purchaser's Operations and the establishment of vegetation is needed to minimize erosion, Purchaser shall take appropriate measures normally used to establish an adequate cover of grass or other vegetation acceptable to Forest Service or take other agreed stabilization measures. Forest Service shall designate on the ground such disturbed areas annually as logging and Temporary Road construction are completed.

Forest Service upon request shall provide advice as to soil preparation and the application of suitable seed mixtures, mulch and fertilizer and the timing of such work. In no event shall Purchaser be required to treat more acres than that shown in the legend of Sale Area Map.

Purchaser shall use the type of native seed mixtures, mulch, and fertilizer as listed below:

Seed Mix	Pounds/Acre	Type of Mulch	Fertilizer

Special Erosion Prevention Measures Purchaser shall give adequate treatment by spreading slash or wood chips or by agreement giving other treatment to portion of tractor roads, skid trails, landings, cable yarding corridors, tractor-end lined corridors and Temporary Road fills where necessary to supplement other erosion prevention measures required elsewhere in this contract. In no event shall Purchaser be required to treat more acres than that shown in the legend of Sale Area Map. The specific locations to be treated shall be designated on the ground by Forest Service. These special erosion prevention measures are to be done within the same date and time periods as stated above.

Soil Scarification. In addition to meeting the requirements of B6.63 and B6.64, Purchaser shall scarify the following areas; unless otherwise agreed:

- (a) Traveled Way of National Forest System roads used by Purchaser and listed in the legend of Sale Area Map.
- (b) Roadbeds of any Temporary Roads used for log hauling by Purchaser.
- (c) Landings or portions thereof located outside Roadbed limits of National Forest System roads not designated for scarification.

Scarification shall be to a depth of 6 inches, with intervals between striations not to exceed 12 inches, unless otherwise agreed.

Backblading Within recreation development sites and public use areas designated on Sale Area Map, Purchaser shall, at Forest Service request, backblade skid trails in lieu of cross ditching.

Tillage In addition to meeting the requirements of B6.64, unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.

Tillage shall be accomplished by equipment that will lift and fracture the soil by vertical and lateral shattering, leaving soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted.

Tillage depth is shown in the following table. Agreement in writing may be made to a lesser depth if rocks or other limiting site conditions are encountered.

Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Purchaser and Forest Service shall agree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.

Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat
Landings		
Main Skid Roads and Tractor Roads designated by Forest Service		
Temporary Roads		

C6.7# - Slash Treatment Methods

<u>Symbol</u>	<u>Method</u>	<u>Definition</u>
Buck-L	"Bucking Large Logging Slash"	Tops and limbs over 4 inches diameter outside bark (d.o.b.), not to be otherwise treated, shall be bucked into lengths not to exceed 6 feet, unless agreed otherwise.
Buck-P	"Bucking and Piling"	Logging Slash smaller than <NA> inches and larger than 4 inches in large end d.o.b. shall be bucked into lengths not to exceed <NA> feet and left in place. Logging Slash 4 inches and smaller in large end d.o.b. shall be hand Piled within Required Disposal Strip for Forest Service disposal.
Bury	"Burying"	Logging Slash shall be buried where agreed in borrow areas, pits, trenches, or other locations reasonably near the area of origin. Logging Slash shall be matted down in layers and shall be covered with at least 2 feet of rock and soil so that the final surface is sloped to drain and relatively smooth.
Chip	"Chipping"	Chippable Logging Slash up to 4 inches in d.o.b. shall be processed through a chipping machine. Chips shall be scattered to a loose depth not exceeding 6 inches.
Deck	"Decking" large material	Logging Slash <> inches or larger in large end d.o.b. and <> feet or more in length shall be Decked for disposal by Forest Service by piling pieces parallel to each other.
Mach	"Machine Piling"	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled by tractor equipped with brush rake for disposal by Forest Service.
Pile	"Piling" small material	Logging Slash smaller than < NA > inches in large end d.o.b. and < NA > feet long shall be hand Piled for disposal by Forest Service.
Remove	"Removing"	Logging Slash shall be moved or hauled to locations shown on Sale Area Map and designated on the ground where it shall be piled for disposal by Forest Service.
Scat 18" Scat 30"	"Scattering"	Logging Slash shall be scattered to reduce slash concentrations with slash being generally left within 18 or 30 inches of the ground as shown on Sale Area Map. Logging Slash shall be scattered into openings away from and

without unnecessary damage to residual trees. All scattered logs shall be limbed, placed away from trees and positioned so they will not roll. When Scattering is specified, another method may be used by agreement.

Stack "Stacking" small material Logging Slash <NA> inches or smaller in large end d.o.b. and <NA> feet or more in length shall be stacked for disposal by Forest Service by piling pieces parallel to each other.

View "Visible Slash Treatment" Designated on Sale Area Map with boundaries posted on the ground are <NA> with distance limitations for visible slash treatment. Within such units and the area of visible Logging Slash adjacent thereto, Logging Slash shall be treated by Purchaser. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Sale Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.

YUMD "Yarding Unutilized Material-Decking" All unutilized material developed by Purchaser's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be Yarded to landings and Decked. Where this is impractical, or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)

YUME "Yarding Unutilized Material-Exterior Boundary" All unutilized material developed by Purchaser's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be yarded to locations a minimum of 50 feet slope distance within the exterior boundaries of such units and positioned so the yarded material will not roll.

Unit	Large End d.o.b. (in)	Length (feet)

YUML "Yarding Unutilized Material-Landing" All unutilized material developed by Purchaser's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be yarded to locations within 100 feet slope distance of landing. Where this is impractical,

or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)

YUMR "Yarding Unutilized
Material-Removal"

All unutilized material developed by Purchaser's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be removed to locations shown on Sale Area Map and designated on the ground, or other agreed locations, and Decked.

Unit	Large End d.o.b. (in)	Length (feet)

Cover "Covering Piles"

All piles shall be covered with a durable waterproof covering as approved by Forest Service. The material shall be at least six feet in width. Piles shall not be less than fifty percent covered, with the covering extending not less than half way down all sides. Pieces of burnable material shall be placed on top of the durable waterproof covering to keep the covering from blowing off the pile.

Fell "Damaged Small
Tress"

Unless treated under other provisions, all trees smaller than the minimum d.b.h. in A2, over 5 feet in height, and damaged beyond recovery by Purchaser's Operations shall be felled. Such trees shall be limbed to a stem diameter outside bark of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and shall be bucked into lengths not exceeding 20 feet.

Fire-L "Firelines"

Shown on Sale Area Map and to be flagged on ground after logging by Forest Service are firelines to be constructed by Purchaser unless otherwise agreed in writing. Purchaser shall construct not more than <> chains of fireline by hand and not more than <NA> chains of fireline by tractor.

Firelines constructed by hand shall be cleared of all vegetative debris larger than one inch in d.o.b. and three feet long. The width of firelines shall be at least <NA> feet, except across the top of cutting units where the width shall be at least <NA> feet. At least <NA> feet shall be scraped to mineral soil. In areas where there is potential for burning material to roll, the fireline shall be constructed in a trenched manner on the downhill side.

Tractor lines shall be cleared of all vegetative debris, larger than one inch in diameter and three feet long, to a width of at least <NA> feet, with at least <NA> feet to mineral soil. No slash, brush, or other vegetative debris shall be buried in or under berms created in the construction of firelines. All limbs overhanging into the fireline, shall be removed to a minimum height of 8 feet.

Firelines shall be completed on each unit in accordance with B6.311 unless otherwise agreed in writing.

Fuel-B "Fuelbreaks"

In subdivisions <NA> and shown on Sale Area Map, Logging Slash shall be scattered within <NA> feet slope distance of the inside edge of firelines. Shown on Sale Area Map, with boundaries designated on the ground, are "Fuelbreaks" of varying width. Within such Fuelbreaks all Logging slash and Construction slash shall be treated by Purchaser. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these methods unless a method is specified or prohibited on Sale Area Map. Slash larger than treatment size requirements of selected or specified methods shall be scattered outside Fuelbreak, or treated as agreed.

PILING SPECIFICATIONS. All piles shall be reasonably compact and free of soil to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. Such Logging Slash shall be bucked into lengths not exceeding ten feet prior to piling. Maximum width of tractor, with brush rake attached, shall not exceed <NA> inches. Machine Piling is not required on areas where use of tractors would cause undue damage to residual timber or where slopes exceed <NA> percent. Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags. Piles shall be no less than four feet in height or greater than <10> feet in height. Material extending three feet or more outside the edge of a pile shall be trimmed. An eight foot fuelbreak shall be cleared of all but fine material around each Machine Pile and an 18 inch wide fireline shall be cleared to mineral soil around the outer ring of the fuelbreak. For hand piles, Purchaser shall construct a fireline cleared to mineral soil and at least 3 feet wide around each pile. In areas where there is a potential for burning material to roll, firelines, including those for Machine Piles, shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines. Trenches shall be constructed by hand unless otherwise agreed.

UNIT AND SUBDIVISION SLASH TREATMENT SPECIFICATIONS.

	SLASH TREATMENT	
Subdivision or Unit No	Specified Method	Prohibited Method
All	Fell	NA

LANDINGS AND DISPOSAL SITES. Unutilized logs accumulated at landings and disposal sites shall be Decked by Purchaser for disposal by Forest Service. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

	SLASH TREATMENT		
	Subdivision or Unit No.	Specified Method	Maximum Height of Decks
<u>Landings</u>	All units	MACH	15 feet
<u>Disposal Sites</u>			

TREATMENT ALONG PERMANENT ROADS Permanent roads that require roadside slash treatment are listed in the attached table and shown on Sale Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Purchaser. "Required Disposal Strips" are those areas adjacent to permanent roads where slash treatment is required for resource objectives. The width of Required Disposal Strips is shown in the attached table and is measured in slope distance from Roadbed edges of permanent roads. By agreement, in Clearcutting Units and regeneration units slash from Required Disposal Strips may be treated with other Logging Slash. By agreement the location of Required Disposal Strips may be adjusted from side to side without materially changing the total work required.

Slash treatment in Required Disposal Strips shall be accomplished without affecting the proper functioning of channels leading to and from drainage structures.

Logging Slash larger than treatment size requirements of the specified method shall either be Scattered outside Required Disposal Strip, within Required Disposal Strip or Decked at agreed locations as shown in the attached table.

	SLASH TREATMENT			
Road No.	Subdivision and/ or Unit No. or Road Juncitons (From To)	Width of Required Disposal Strip	Specified Method	Slash Larger Than Treatment Size Requirements of Specified Method

TREATMENT ALONG TEMPORARY ROADS. Outside of Clearcutting Units or regeneration units, all trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem d.o.b. of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into lengths not exceeding <> feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

ADDITIONAL SLASH TREATMENT REQUIREMENTS. Within areas shown on Sale Area Map, Purchaser shall perform work according to the specifications in the attached Table, unless otherwise agreed in writing.

Subdivision, Payment Units, Roads and or Road Segments	Additional Slash Treatment Requirements
	<p>Yard all stem material to a top d.o.b. of 1 inch, from timber designated for cutting, with the following exception: broken portions of logs and tops less than 4 feet in length need not be yarded.</p> <p>Broken ends of merchantable logs shall not be bucked off in the units.</p> <p>Slash and Substandard Material accumulated at the landings shall be Decked or Machined Piled, in accordance with specifications above.</p> <p>Material accumulated at landings shall be considered as Timber Subject to Agreement under C2.11#, described as Substandard Material and may be removed and paid for at Purchaser's option.</p>

ASSISTANCE IN SLASH BURNING. If Forest Service requests, Purchaser shall furnish equipment and equipment operators to assist in preparation for slash burning at agreed times prior to the normal slash burning season in the area.

Purchaser shall furnish equipment and equipment operators for burning and mop-up when requested. The amount and kind of equipment requested shall be that normally used in slash treatment work and reasonably available under the existing equipment organization of Purchaser. Forest Service shall reimburse Purchaser for such work at rates common in the area or at previously agreed rates.

C7.2# - SPECIFIED FIRE PRECAUTIONS

Active Landing: A location Purchaser is skidding logs into, or performing other operations such as delimbing, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiled chips only on a cleared landing does not constitute an Active Landing.

Hot Saw: A harvesting system that employs a high-speed (>1100 rpm) rotating felling head (i.e., full rotation lateral tilt head).

Mechanical Operations: The process of felling, skidding, chipping, shredding, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriages, masticators, stroke delimiters, skidders etc.

Specific equipment requirements and fire precautionary measures are shown in the following table and in C7.22#:

<u>A. Fire Tools and Equipment</u>	Purchaser shall meet applicable parts of Section 4428 of the CPRC.
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Unless agreed otherwise, Fire tools kept at each Active Landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Purchaser's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. Fire tools shall be kept in a sealed fire tool box adjacent to the Active Landing and readily accessible in event of fire.

Where cable yarding is used, Purchaser shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a serviceable 5 gallon backpack pump filled with water or a fire extinguisher bearing a label showing at least a 4-A rating must be within 25 feet of each tail and corner block.

Trucks, tractors/skidders, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

All required fire tools shall be maintained in suitable and serviceable condition for fire fighting purposes.

<u>B. Fire Extinguishers</u>	
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Purchaser shall equip each internal combustion yarder, fuel truck, and loader with a (4-A:60-B:C) fire extinguisher for oil and grease fires.

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher.

Fire extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Purchaser shall equip all mechanized harvesting machines and log processors with hydraulic systems, powered by an internal combustion engine (e.g. masticator, chipper, feller/buncher, harvester, forwarder, Hot Saw, stroke delimber, etc), with at least two 4-A:60-B:C fire extinguishers or an acceptable CAFS substitute identified in Section K.

C. Spark Arresters and Mufflers

Except for tractors and other equipment with exhaust-operated turbochargers, Purchaser shall equip each operating tractor and any other internal combustion engine with an approved spark arrester. There shall be no exhaust bypass on any system.

Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildfire Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be properly mounted and maintained according to manufacturer's specifications.

Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.

D. Power Saws

Each power saw shall be equipped with a spark arrester approved and maintained in effective working order as identified in the Spark Arrestor Guide in Section C. above and according to applicable parts of CPRC Section 4442 or 4443. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating saw.

A size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can, but not more than 300 feet from each power saw when used off cleared landing areas.

E. Fire Supervisor & Fire Patrolperson

Purchaser shall designate in the fire plan required by B7.1 and furnish on Sale Area during operating hours a fire supervisor, named in writing and authorized to act on behalf of Purchaser in fire prevention and suppression matters.

Unless agreed otherwise, Purchaser shall furnish and designate in writing, a Fire Patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, the Fire Patrolperson is required to patrol the operation for the prevention and detection of fires, to take suppression action where necessary and to notify Forest Service as required under Sections I. Reporting Fires and L. Communications. This Fire Patrol is required on foot, unless otherwise agreed.

By written agreement, one Fire Patrolperson may provide patrol on this and adjacent projects or sales. No Fire Patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

F. Seasonal Permits

Purchaser shall obtain written permits from Forest Service before allowing welding, warming fires or burning, subject to C7.22# - Emergency Precautions.

G. Clearing of
Fuels

Purchaser shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	All running blocks on a cable yarding operation shall be located in the center of an area that is cleared to mineral soil at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.

H. Smoking

All smoking shall be confined within a car, truck, crew rig or other enclosed cab after 1:00 PM on Ev days and all hours on E days (C7.22#). At other times, any smoking shall be done while sitting in an area at least 3 feet in diameter, cleared of flammable materials. Burning tobacco and matches shall be extinguished before they are properly disposed.

I. Reporting
Fires

As soon as feasible, but no later than **15 minutes** after discovery, Purchaser shall notify Forest Service of any fires on Sale Area or along roads used by Purchaser.

J. Tank Truck

Purchaser shall provide a water tank truck or trailer on or in proximity to Sale Area during Purchaser's Operations hereunder during Fire Precautionary Period unless otherwise agreed.

Tank truck or trailer shall contain at least 300 gallons of water and comply with the following requirements:

(1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Sale Area by Forest Service using a 5/16 inch orifice with a one inch in line test kit and shall meet or exceed the pressure values identified in the following table for nearest temperature and elevation:

Temp	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet	
55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139	21
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20
	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M	P S I	G P M

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

(2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.

(3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

(4) Sufficient fuel to run pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

~~(5)~~ When Purchaser is using Hot Saws or Masticators an additional 250 feet of light weight hose, approved by Forest Service, shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurturances in (2) and (3) above.

~~(6)~~ This equipment and accessories shall be deliverable to a fire in the area of operations and is subject to the requirements for each specific activity level identified in C7.22#.

K. Compressed Air Foam System (CAFS)

A fire suppression system where compressed air is added to water and a foaming agent. By agreement, Purchaser may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

1. Variable foam expansion ratio - 10:1 to 20:1.

2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
4. The unit shall be capable of being completely recharged within 10 minutes.
5. When used on cable yarding landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, Masticators and similar equipment identified in Section B. above may be substituted with a 3 gallon CAFS.

Tank truck, trailer or equivalent may be substituted with a 30 Gallon CAFS with at least 550 feet of one inch hose and an adjustable nozzle with enough water, air and foam concentrate for at least one recharge.

This equipment and accessories shall also be deliverable to a fire in the area of operations and subject to the requirements for each specific activity level identified in C7.22#.

L. Communications

Purchaser shall furnish a serviceable communications system such as a telephone, radio-telephone, radio system or satellite phone connecting each operating side within the Sale Area with Purchaser's headquarters, and capable of notifying Forest Service within **15 minutes** of discovery of any fires on the Sale Area or along Purchaser's haul route. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may agree to a reasonable alternative notification method.

A Citizen's Band (CB) radio is not acceptable communications.

M. Cable Yarding Tank Unit

When all or part of Included Timber will be harvested by a long span (over 1,500 feet) cable yarding operation, Purchaser shall provide at each active cable yarding landing a tank truck, trailer or acceptable CAFS substitute which can be lifted and transported by the carriage.

The unit shall meet the same requirements as specified for the tank truck, trailer or approved CAFS substitute.

N. Helicopter Yarding Fire Precautions

Purchaser shall provide and maintain fire equipment as follows:

1. The fire tool box required under this provision shall be equipped for attachment to the helicopter long line so that it may be hauled to needed locations. Such attachment device shall not interfere with access to fire tools. Unless agreed otherwise, the fire tool box shall be located at the Active Landing ready for immediate dispatch.
2. An external helibucket readily attachable to the helicopter, with a capacity of at least 500 gallons, and having a remote control door mechanism adequate for rapid dropping of water. The helibucket shall be located at the helicopter service landing and shall be filled with water ready for immediate dispatch unless otherwise agreed.

3. All aircraft used in conjunction with Purchaser's Operations shall be equipped with an operable radio system capable of meeting Region Five avionics requirements.
4. For protection of fuel servicing operations, fire extinguishers which have the following ratings based on the open hose discharge capacity, i.e., "broken hose," of the aircraft fueling system shall be readily available:
 - a. Where said capacity does not exceed 200 gallons per minute, at least one approved extinguisher having a minimum rating of 20-B;
 - b. Where said capacity is in excess of 200 gallons per minute, but not over 350 gallons per minute, one approved extinguisher having a minimum rating of 80-B;
 - c. Where said capacity is in excess of 350 gallons per minute, two approved extinguishers, each having a minimum rating of 80-B.
5. By agreement, a suitable CAFS may also be used in lieu of the above extinguishers.
6. Extinguishers of over 50 pounds gross weight shall be of wheeled type or be mounted on carts to provide mobility and ease of handling.

PROJECT ACTIVITY LEVEL (PAL) - C7.22# - EMERGENCY PRECAUTIONS**PROJECT ACTIVITY LEVEL TABLE**

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
A	Minimum required by C7.2#.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer or approved CAFS substitute shall be within $\frac{1}{4}$ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire Patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3. No Welding or cutting of metal after 1:00 PM, except by special permit.
Ev	<p>1. The following activities may operate all day:</p> <ul style="list-style-type: none"> a) Loading and hauling logs decked at approved landings. b) Loading and hauling chips stockpiled at approved landings. c) Servicing equipment at approved sites. d) Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development). e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings. <p>2. Hot Saws or Masticators may operate until 1:00 PM; provided that:</p> <ul style="list-style-type: none"> a) A tractor or other equipment with a blade capable of constructing fireline is on or adjacent to the active landing or within $\frac{1}{4}$ mile of the operating equipment. This piece of equipment shall have effective communication with the Hot Saw or Masticator. b) Any additional restrictions specified by the Forest. <p>3. All other conventional Mechanical Operations are permitted until 1:00 PM.</p> <p>4. Some operations may be permitted after 1:00 PM, on a case-by-case basis, under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are:</p> <ul style="list-style-type: none"> • Rubber Tire Skidding • Chipping on Landings

	<ul style="list-style-type: none"> • Helicopter Yarding • Fire Salvage <p>When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of Forest Service. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Purchaser's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).</p>
E	<p>The following activities may operate all day:</p> <ol style="list-style-type: none"> 1. Loading and hauling logs decked at approved landings. 2. Loading and hauling chips stockpiled at approved landings. 3. Servicing Equipment at approved sites. 4. Dust abatement, road maintenance (chainsaw use prohibited) or loading stock piles and rock aggregate installation (does not include pit or quarry development). 5. Chainsaw operation associated with loading at approved landings. <p>All other activities are prohibited.</p>

Project Activity Level Climatology								
Station/SIG/Unit	Forest Average				Years Analyzed		2007-2012	
	A	B	C	D	Ev	E	Days	
Year	Actual Days per year at Each PAL Value						Analyzed	
2007	15	7	51	27	45	7	152	
2008	15	9	29	35	43	8	139	
2009	13	20	43	31	39	7	153	
2010	28	20	38	26	30	0	142	
2011	9	10	45	34	23	5	126	
2012	8	13	49	40	40	21	171	
Average	14.7	13.2	42.5	32.2	36.7	8.0	147.2	